REMARKS/ARGUMENTS

After entry of this amendment, claims 27, 29-31, 33-38, 40, and 42-47 will remain pending in this application. Claim 28 has been cancelled.

Claims 27, 29, 30, 33, and 34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al. (Okumura), United States patent number 5,763,921 in view of Yuki et al. (Yuki), United States patent number 5,466,957. Claims 28 and 31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura and Yuki in view of Sanchez, United States patent number 5,583,067. Claims 35, 36, 38, 40, 42, and 43 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yuki in view of Sanchez. Claims 37 and 44-47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yuki and Sanchez in view of Okumura.

Reconsideration of these rejections in light of these amendments and remarks is respectfully requested.

Drawings

Figure 4 has been disapproved for failing to identify a portion of the enhancement implant between the pocket implants and source drain regions. (See pending office action page 2 paragraph 1.) A revised Figure 4 is attached.

Formalities

Claims 27-31, 33, 34, and 45-47 stand rejected under 35 U.S.C. 112. The pending office action states that it "is not clear how a single mask can be used to accomplish depositing a field implant, depositing a well implant, and depositing an enhancement implant."

Specifically, it is asked "How can the well be formed when there is a mask over the area where the well is to be formed?" (See pending office action, page 3, line 7.)

It is well known in the art that two types of resist may be used when forming layers. One is positive, while the other is negative. With the first, resist is removed where there is an opening in a mask, while with the second, resist remains where there is an opening.

Accordingly, one skilled in the art will appreciate that mask region 410 may be an opening, in which case positive resist is appropriate, or mask region 410 may be opaque, in which case negative resist is appropriate. The most important feature is the boundary of mask 410, which is clearly shown in Figure 4. The enhancement region is similarly implanted.

Further, it is stated that "Field implant 120 is shown to exist outside the area of the mask, while the well 140 and enhancement region are shown below the mask." (See pending office action page 3, line 12.)

Again, if the mask region 410 is an opening, one skilled in the art will appreciate that negative resist should be used to define the field implant 120 regions. Similarly, if the mask region 410 is opaque, one skilled in the art will appreciate that positive resist should be used to define the field implant 120 regions. Again, the most important feature is the boundary of mask 410, which is clearly shown in Figure 4.

In this way, these three implants are made using one mask, identified in Figure 4 by reference number 410.

Claim 27

Claim 27 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura in view of Yuki. But these references do not teach each and every element of this claim. For example, claim 27, as amended, recites "adjusting a short channel effect of the transistor by diffusing the first pocket implant and the second pocket implant laterally in the semiconductor substrate." The cited references do not teach this limitation.

Sanchez has been cited as teaching diffusing the first pocket implant and the second pocket implant laterally in the semiconductor substrate. (See pending office action page 6, lines 9 and 10.)

But this passage teaches away from diffusing the pocket implants laterally. Specifically, Sanchez discusses minimizing lateral diffusion by using lower temperatures and shorter process times. (See Sanchez, column 7, lines 44-46.)

Further, the cited references do not teach adjusting a short channel effect of the transistor. The pending office action states that this "an intended use limitation which does not

bear any patentable weight within the method claim." (See pending office action, page 8, lines 8-10.) Applicants disagree with this characterization. Even so, the MPEP states that in "a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art." (See MPEP 707.07(g).)

Here the prior art, specifically Sanchez, teaches how to minimize lateral diffusion. In contrast, this claim recites "adjusting a short channel effect of the transistor by diffusing the first pocket implant and the second pocket implant laterally in the semiconductor substrate." Applicants assert that "minimizing" and "adjusting" result in a manipulative difference.

For at least these reasons, claim 27 should be allowed.

Other claims

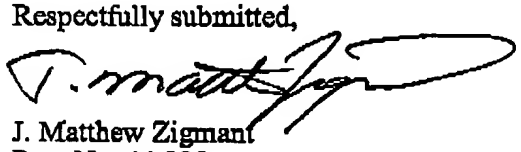
Claims 35, 38, and 42 should be allowed for similar reasons as claim 27. The other claims depend on these claims, and should be allowed for the same reasons, and for the additional limitations they recite.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal notice of allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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